



Superior Clamping and Gripping



## Product Information

Vacuum gripper with shank interface GSW-V

## GSW-V

Vacuum gripper with shank interface

**Compact. Cost-effective. Productive.**

# Vacuum gripper GSW-V

Vacuum gripper for spindle interfaces for handling flat components

## Field of application

Unit for automatic loading and unloading of machining centers by their own axis, which provides compressed air and coolant supply via the tool mounting.

## Advantages – Your benefits

**Low-cost module** for flexible automation in your machine

**Fast, automated gripper changeover** from the gripper to the storage rack

**Fully automated workpiece changeover** without robot or gantry system

**Universally** suitable for many different workpieces



Suction pad diameter  
30 .. 125 mm



Clamping diameter  
20 .. 32 mm



Weight  
0.12 .. 0.39 kg



Gripping force  
55 .. 980 N



Workpiece weight  
0.28 .. 4.9 kg

## Functional description

The gripper can be used in any machine which provides compressed air or lubricating coolants supply via the toolholder mounting.

The vacuum gripper is equipped with an integrated

Venturi nozzle, and therefore does not require a vacuum connection to generate negative pressure.

During the gripping operation the gripper continuously supplies coolant or compressed air.



① **Vacuum suction cup**  
for a flexible range of parts

② **Intake duct**  
for producing suction power

③ **Media supply**  
via spindel interface

④ **Venturi nozzle**  
for producing negativ pressure

⑤ **Outlet opening**  
for diverting the overpressure

## General notes about the series

**Operating principle:** Venturi nozzle

**Housing material:** Aluminum

**Spindle interface material:** Aluminum alloy

**Material of the suction cups:** NBR-60

**Actuation:** hydraulically with machine coolant (filtered, max. particle size of 30 µm) or pneumatically with filtered compressed air in accordance with ISO 8573-1:2010 [7:4:4].

**Warranty:** 24 months

**Service life characteristics:** on request

**Scope of delivery:** Assembly and operating manual

**Suction pad:** Perfectly adaptable to smooth surfaces, with damping effect during attachment, and stroke effect during the suction phase. Special suction cups on request.

**Times:** the indicated times depend on the flow rate and pressure of the drive medium and the therefrom resulting electrical resistances.

**Workpiece weight:** is calculated for force-fit gripping, specified rated flow rate and pressure, as well as a confidence coefficient of 2 against the gravitational force of the earth's acceleration.



## Application example

Handling of pinions in a milling center

- ① Vacuum gripper GSW-V
- ② Magnetic gripper GSW-M
- ③ Gripper with shaft interface GSW-B and PGN-plus
- ④ Gripper with shaft interface GSW-B and PZN-plus
- ⑤ Cleaning unit RGG

## SCHUNK offers more ...

The following components make the product even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



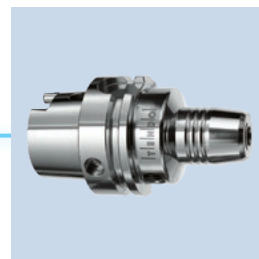
Gripper with shaft interface



Magnetic gripper



Cleaning Unit



Toolholders



Stationary clamping technology

① For more information on these products can be found on the following product pages or at [schunk.com](http://schunk.com).

## Options and special information

Please note that applications under extreme conditions (e.g. coolant, casting or abrasive dust) will reduce the service life of this product considerably.

Further shaft diameters on request.

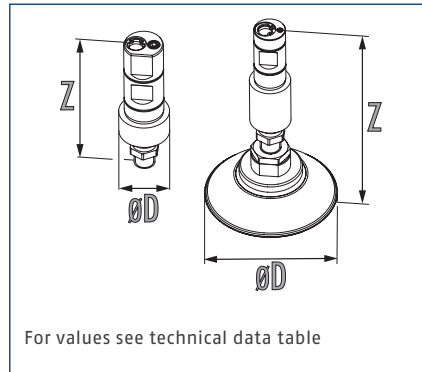
Please note that the product is not suitable for heat shrinking toolholders.

**Precondition:** If the spindles do not rotate, then the machines have to provide compressed air or coolant.

# GSW-V 20

Vacuum gripper with shank interface

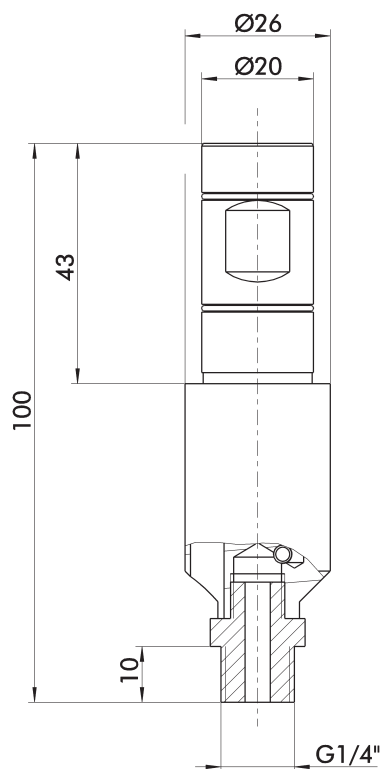
## Dimensions



## Technical data

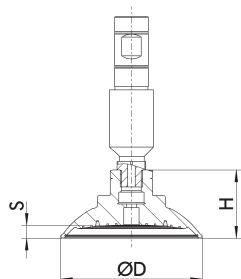
| Description                                  |         | GSW-V20  | GSW-V20-SND030 | GSW-V20-SND080 | GSW-V20-SND125 |
|----------------------------------------------|---------|----------|----------------|----------------|----------------|
| ID                                           |         | 0309120  | 0309121        | 0309122        | 0309123        |
| Weight                                       | [kg]    | 0.12     | 0.14           | 0.19           | 0.28           |
| Recommended workpiece weight                 | [kg]    |          | 0.28           | 2              | 4.9            |
| Time evacuation                              | [s]     |          | 1              | 1.1            | 1.2            |
| Time for putting down                        | [s]     |          | 0.7            | 0.7            | 0.7            |
| Suction force                                | [N]     |          | 55             | 400            | 980            |
| Min./max. ambient temperature                | [°C]    | 5/90     | 5/90           | 5/90           | 5/90           |
| Max. permissible speed                       | [1/min] | 20       | 20             | 20             | 20             |
| Nominal operating pressure compressed air    | [bar]   | 6        | 6              | 6              | 6              |
| Nominal flow rate compressed air             | [l/min] | 300      | 300            | 300            | 300            |
| Min./max. operating pressure, compressed air | [bar]   | 4/8      | 4/8            | 4/8            | 4/8            |
| Min. flow rate compressed air                | [l/min] | 220      | 220            | 220            | 220            |
| Nominal operating pressure coolant           | [bar]   | 40       | 40             | 40             | 40             |
| Nominal flow rate coolant                    | [l/min] | 25       | 25             | 25             | 25             |
| Min./max. operating pressure, coolant        | [bar]   | 20/60    | 20/60          | 20/60          | 20/60          |
| Nominal vacuum                               | [bar]   | -0.8     | -0.8           | -0.8           | -0.8           |
| Min. vacuum                                  | [bar]   | -0.6     | -0.6           | -0.6           | -0.6           |
| Noise pressure level                         | [dB(A)] | 90       | 90             | 90             | 90             |
| Dimensions Ø D x Z                           | [mm]    | 26 x 100 | 34 x 110       | 89 x 130       | 135 x 138      |

## Main view



The drawing shows the unit in standard design, without considering any dimensions of the options described below.

## Suction cup dimensions

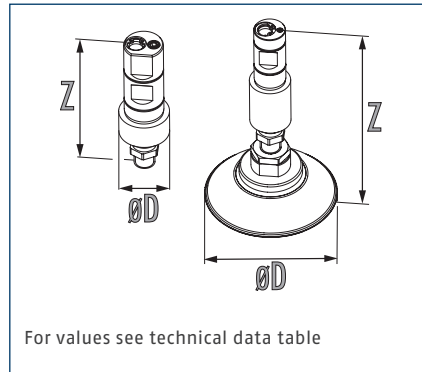


| Description  | ID      | D    | H    | S    |
|--------------|---------|------|------|------|
|              |         | [mm] | [mm] | [mm] |
| Suction pad  |         |      |      |      |
| SND 125-G1/4 | 0309137 | 135  | 48   | 12.5 |
| SND 30-G1/4  | 0309135 | 34   | 20   | 3    |
| SND 80-G1/4  | 0309136 | 89   | 40   | 7.6  |

# GSW-V 25

Vacuum gripper with shank interface

## Dimensions

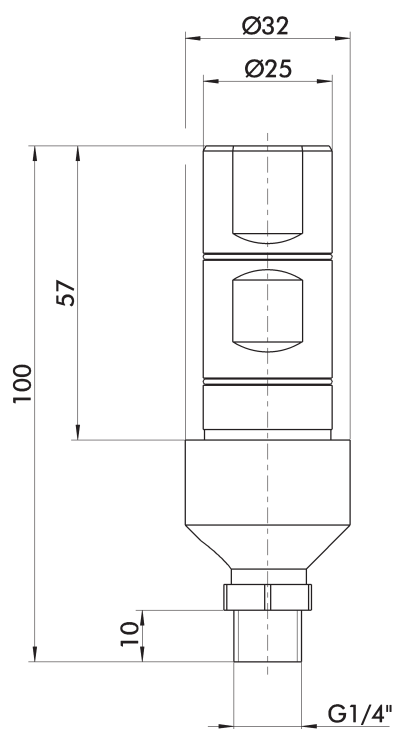


## Technical data

| Description                                  |         | GSW-V25  | GSW-V25-SND030 | GSW-V25-SND080 | GSW-V25-SND125 |
|----------------------------------------------|---------|----------|----------------|----------------|----------------|
| ID                                           |         | 0309125  | 0309126        | 0309127        | 0309128        |
| Weight                                       | [kg]    | 0.15     | 0.17           | 0.22           | 0.31           |
| Recommended workpiece weight                 | [kg]    |          | 0.28           | 2              | 4.9            |
| Time evacuation                              | [s]     |          | 1              | 1.1            | 1.2            |
| Time for putting down                        | [s]     |          | 0.7            | 0.7            | 0.7            |
| Suction force                                | [N]     |          | 55             | 400            | 980            |
| Min./max. ambient temperature                | [°C]    | 5/90     | 5/90           | 5/90           | 5/90           |
| Max. permissible speed                       | [1/min] | 20       | 20             | 20             | 20             |
| Nominal operating pressure compressed air    | [bar]   | 6        | 6              | 6              | 6              |
| Nominal flow rate compressed air             | [l/min] | 300      | 300            | 300            | 300            |
| Min./max. operating pressure, compressed air | [bar]   | 4/8      | 4/8            | 4/8            | 4/8            |
| Min. flow rate compressed air                | [l/min] | 200      | 200            | 200            | 200            |
| Nominal operating pressure coolant           | [bar]   | 40       | 40             | 40             | 40             |
| Nominal flow rate coolant                    | [l/min] | 25       | 25             | 25             | 25             |
| Min./max. operating pressure, coolant        | [bar]   | 20/60    | 20/60          | 20/60          | 20/60          |
| Nominal vacuum                               | [bar]   | -0.8     | -0.8           | -0.8           | -0.8           |
| Min. vacuum                                  | [bar]   | -0.6     | -0.6           | -0.6           | -0.6           |
| Noise pressure level                         | [dB(A)] | 94       | 94             | 94             | 94             |
| Dimensions Ø D x Z                           | [mm]    | 32 x 100 | 34 x 110       | 89 x 130       | 135 x 138      |

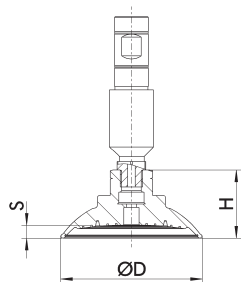


## Main view



The drawing shows the unit in standard design, without considering any dimensions of the options described below.

## Suction cup dimensions

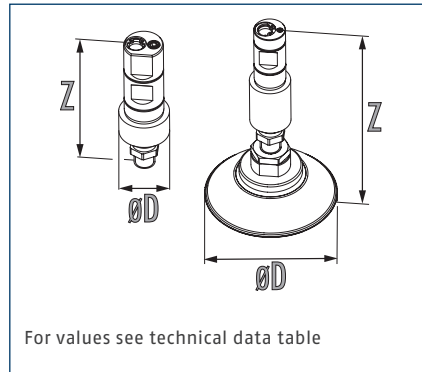


| Description  | ID      | D    | H    | S    |
|--------------|---------|------|------|------|
|              |         | [mm] | [mm] | [mm] |
| Suction pad  |         |      |      |      |
| SND 125-G1/4 | 0309137 | 135  | 48   | 12.5 |
| SND 30-G1/4  | 0309135 | 34   | 20   | 3    |
| SND 80-G1/4  | 0309136 | 89   | 40   | 7.6  |

# GSW-V 32

Vacuum gripper with shank interface

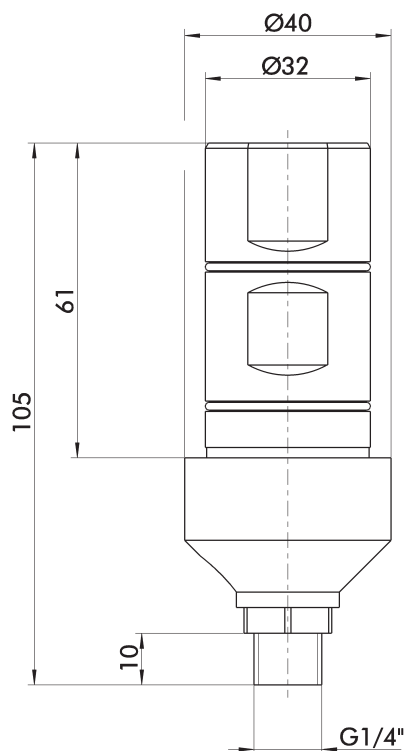
## Dimensions



## Technical data

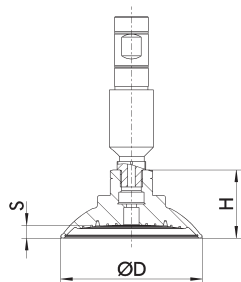
| Description                                  |         | GSW-V32  | GSW-V32-SND030 | GSW-V32-SND080 | GSW-V32-SND125 |
|----------------------------------------------|---------|----------|----------------|----------------|----------------|
| ID                                           |         | 0309130  | 0309131        | 0309132        | 0309133        |
| Weight                                       | [kg]    | 0.23     | 0.24           | 0.3            | 0.39           |
| Recommended workpiece weight                 | [kg]    |          | 0.28           | 2              | 4.9            |
| Time evacuation                              | [s]     |          | 1              | 1.1            | 1.2            |
| Time for putting down                        | [s]     |          | 0.7            | 0.7            | 0.7            |
| Suction force                                | [N]     |          | 55             | 400            | 980            |
| Min./max. ambient temperature                | [°C]    | 5/90     | 5/90           | 5/90           | 5/90           |
| Max. permissible speed                       | [1/min] | 20       | 20             | 20             | 20             |
| Nominal operating pressure compressed air    | [bar]   | 6        | 6              | 6              | 6              |
| Nominal flow rate compressed air             | [l/min] | 350      | 350            | 350            | 350            |
| Min./max. operating pressure, compressed air | [bar]   | 4/8      | 4/8            | 4/8            | 4/8            |
| Min. flow rate compressed air                | [l/min] | 250      | 250            | 250            | 250            |
| Nominal operating pressure coolant           | [bar]   | 40       | 40             | 40             | 40             |
| Nominal flow rate coolant                    | [l/min] | 25       | 25             | 25             | 25             |
| Min./max. operating pressure, coolant        | [bar]   | 20/60    | 20/60          | 20/60          | 20/60          |
| Nominal vacuum                               | [bar]   | -0.8     | -0.8           | -0.8           | -0.8           |
| Min. vacuum                                  | [bar]   | -0.6     | -0.6           | -0.6           | -0.6           |
| Noise pressure level                         | [dB(A)] | 98       | 98             | 98             | 98             |
| Dimensions Ø D x Z                           | [mm]    | 40 x 105 | 34 x 115       | 89 x 135       | 135 x 143      |

## Main view



The drawing shows the unit in standard design, without considering any dimensions of the options described below.

## Suction cup dimensions



| Description  | ID      | D    | H    | S    |
|--------------|---------|------|------|------|
|              |         | [mm] | [mm] | [mm] |
| Suction pad  |         |      |      |      |
| SND 125-G1/4 | 0309137 | 135  | 48   | 12.5 |
| SND 30-G1/4  | 0309135 | 34   | 20   | 3    |
| SND 80-G1/4  | 0309136 | 89   | 40   | 7.6  |



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